



The Advanced Manufacturing program incorporates Tooling U and MasterCam Online training into its curriculum to provide students with in-depth knowledge of all aspects of metalworking and manufacturing. Students learn skills for safe operation of modern metalworking tools such as lathes, mills, drills, grinders, and computerized numerical control equipment.

Curriculum:

- Abrasives and precision grinding machines
- Basic metallurgy, heat treating
- CNC/CAD/CAM lathe
- CNC/CAD/CAM milling
- Contour bandsawing
- Drill press operations
- Electrical discharge machining
- Engine lathe operations
- G&M coding
- Geometric dimensioning and tolerancing
- Layout, hand tools and benchwork
- Machine shop theory
- MasterCam
- Medical machining
- Milling machine operations

Curriculum [cont'd]:

- AC/DC Circuits
- Hydraulics
- Industrial Maintenance
- Physics of metal cutting
- Pneumatics
- Precision measurement
- Print reading
- Tooling U
- Vertical/horizontal saw operation

Certifications:

- Pre-Apprenticeship ODE
- 10-Hour OSHA Manufacturing



Students have the opportunity to earn industry credentials and college credits.

Certifications [cont'd]:

- CPR/First Aid & AED
- Haas Basic CNC Lathe Operator
- Haas CNC Basic Mill Operator
- FASTech Mastercam Certified for Lathe Turning CNC
- FASTech Mastercam Certified for 2.5 Axis Milling CNC

Opportunities:

- Engineering / Design / Internship
- Machine Set-Up/Machine Repair
- Machinist/CNC Machinist
- Mold Maker / Tool and Die Maker
- Quality Control Inspector
- Tooling/Applications Engineer



Visit mcjvs.edu for more information about our Advanced Manufacturing program.

